

REMARKS

The present application includes pending claims 1-29, all of which have been rejected. Additionally, Claim 4 was objected to due to a typographical error. Claim 4 has been amended pursuant to the Examiner's recommendation to overcome this objection. The Applicant submits that the pending claims define patentable subject matter.

Claims 1-10 and 18-29 stand rejected under 35 U.S.C. § 112, 2nd ¶, as being indefinite. Claim 18 has been amended to remove the allegedly indefinite term. As such, claim 18 is clearly not indefinite.

Claims 1-10 and 19-29 stand rejected under 35 U.S.C. § 112, 2nd ¶, because they recite (or incorporate) an allegedly indefinite term, "chilled." Although the Office Action concludes that the term "chilled" is indefinite, the Office Action assigns the term a definite meaning (although the Applicant respectfully submits an incorrect meaning). *See* Office Action at page 3 ("[T]he Examiner takes the position that the 'chilled' liquid is one in which the liquid is cooled to a temperature below that of the element it is intended to cool.") The Applicant respectfully submits that the conclusion that the term "chilled" is indefinite while simultaneously setting forth a definition for that term are inconsistent with one another.

The term "chilled" is definite. The definition proposed by the current Office Action, however, is not consistent with the specification or common usage. The adjective, "chilled," is defined as "chilly," which is further defined as "cold enough to cause shivering" and "seized with cold." *See* Webster's II New College Dictionary (2001) (copy at relevant page attached as Tab A to January 10, 2006 Amendment).

After the dictionary definitions above were pointed out by Applicant, the November 3, 2006, Office Action rejected certain claims as anticipated by resorting to a different dictionary than the one already cited by Applicant. The dictionary relied upon by the November 3, 2006, Office Action was published in 1958. In a November 21, 2006 response, Applicant pointed out that the 2001 dictionary should control over the 1958 dictionary, stating:

the Office Action's reliance on a 1958 dictionary instead of the Applicant-proffered 2001 dictionary is contrary to claim construction principles. *See, e.g., Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) ("We have made clear, moreover, that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question **at the time of the invention**, i.e., as of the effective filing date of the patent application.") (emphasis added).

November 21, 2006 Response at p. 11.

The current Office Action seemingly disregards both dictionaries, however, and asserts that the term "chilled" is indefinite. Applicant respectfully submits, as it has previously submitted, that the term "chilled" should be interpreted pursuant to its common usage as set forth in the contemporary dictionary (*i.e.*, Webster's II New College Dictionary (2001)). For at least this reason, Applicant respectfully submits that claims 1-10 and 19-29 are not indefinite.

I. Claim Rejections Under 35 USC § 103(a)

Claims 1, 6-7, and 9-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Innovative Technology Summary Report ("ITSR") in view of U.S. Pat. App. Pub. 2002/0181654 to Baertsch *et al.* ("Baertsch"), U.S. Pat. 5,299,249 to Burke *et al.* ("Burke"), and U.S. Pat. App. Pub. 2001/0017908 to Dilick ("Dilick"). Claims 2-5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of

Baertsch, Burke, Dilick, and U.S. Pat. 5,185,774 to Klostermann ("Klostermann"). Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Burke, Dilick, and U.S. Pat. 5,226,064 to Yahata *et al.* ("Yahata"). Claims 11-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Yahata, and U.S. Pat. 5,310,361 to Muchowicz *et al.* ("Muchowicz"). Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Yahata, Muchowicz, and U.S. Reissue Pat. 35,025 to Anderton ("Anderton"). Claims 19-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Burke, Yahata, Dilick, and Muchowicz. Claims 25-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Burke, Klostermann, and Dilick. Claim 29 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Burke, Klostermann, Dilick and Yahata. The Applicant respectfully traverses these rejections for the reasons previously set forth during prosecution and those set forth herein.

A determination of obviousness depends on (1) the scope and content of the prior art; (2) the differences between the claimed invention and the prior art; (3) the level of ordinary skill in the art; and (4) any relevant secondary considerations, including commercial success, long felt but unsolved needs, and failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). With respect to the first factor, it is required that there be a determination of what the prior art teaches, whether it teaches away from the claimed invention, and whether it motivates a combination of teachings from different references. *Dystar Textilfarben GmbH v. C.H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed. Cir. 2006). This is to prevent the Supreme Court-proscribed use of hindsight. *Id.* "In

such situations, the proper question is whether the ordinary artisan possesses knowledge and skills rendering him capable of combining the prior art references.” *Id.* at 1368. When there is no suggestion to combine the references set forth in the references themselves, then either the knowledge of a person of ordinary skill in the art or the nature of the problem addressed by the invention must lead the person of ordinary skill to the references. *Id.* at 1365.

A. Claims 1, 6-7, and 9-10 Are Not Obvious

Claims 1, 6-7, and 9-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Burke, and Dilick. In doing so, however, the Office Action employs hindsight to combine non-analogous art. Additionally, the proposed combination of references does not disclose all the elements of the claims.

1. There Is No Suggestion or Motivation To Combine ITSR With The Other References

ITSR relates to an industrial x-ray system, which deals with detecting heavy metals in ventilation ducts at U.S. Department of Energy (“DOE”) Complex facilities. *See* ITSR at p. 1. ITSR is not directed to cooling or powering medical imaging systems, as demonstrated by the following excerpt:

Ventilation ducts, piping, and process equipment in DOE Complex facilities contain an assortment of heavy metal contaminants. Uranium and plutonium are two of the more prevalent heavy metal contaminants. The presence of these heavy metals is hard to detect because alpha particles emitted from these contaminants are easily stopped by container walls. With the use of conventional survey instruments, low energy gammas emitted from these radioactive heavy metals can be measured. Although the presence of uranium and plutonium can be detected by passive gamma measurements, it is difficult to accurately quantify the amount of these contaminants using the passive gamma method. Different container geometries and varying wall thicknesses complicate, and ultimately degrade, the passive gamma measurements. The X-Ray, K-

Edge Heavy Metal Detection System does not rely on gamma ray emissions from the holdup material and is capable of providing a quantifiable, non-destructive evaluation of containers with different geometries and wall thicknesses.

See ITSR at p. 2. A person of ordinary skill in the art of cooling and powering medical imaging systems would not be led to ITSR. Moreover, there is no suggestion within the other references or within the knowledge of skill in the art for a person of ordinary skill, when attempting to solve the problem of cooling a medical imaging system, to look to an industrial x-ray system that is used for detecting heavy metals. ITSR is non-analogous art. For at least this reason, Applicant respectfully submits that the proposed combination does not render claims 1, 6-7, and 9-10 unpatentable.

2. The Proposed Combination Of Art Does Not Disclose All Of The Elements Of The Claims

a) Dilick Does Not Disclose “an auxiliary module removably connected to said medical imaging device having a cooling unit”

The Office Action relies on Dilick because it allegedly “teaches removably connecting to said imaging device.” Office Action at p. 5. The rejected claims however recite (or incorporate): “an auxiliary module removably connected to said medical imaging device having a cooling unit”. See Claim 1. Dilick merely describes connecting oil hoses for circulating “insulating oil” through an x-ray tube housing. See Dilick at ¶¶ 9 and 60. Although Dilick illustrates removable connections for these oil hoses in Figure 5, neither it, nor any of the other cited references, describes, illustrates, or discloses “an auxiliary module removably connected to said medical imaging device having a cooling unit” as recited in the rejected claims. For at least this reason, Applicant respectfully submits that the proposed combination of references does not render claims 1, 6-7, and 9-10 unpatentable.

b) Burke Does Not Disclose “a cooling unit configured to cool liquid to a chilled state and circulate the chilled liquid to and from the imaging element”

The Office Action relies on Burke because it allegedly “teaches configuring to cool liquid to a chilled state and circulating the liquid to and from said imaging element.” Office Action at p. 4 (citations omitted). Burke describes a scanning system that circulates cooling fluid through a heat exchanger to keep a target anode cool.

The housing and the anode define an annular cooling fluid path or channel 12 in intimate thermal communication with the anode face, specifically along an opposite surface of the anode. The anode can be a large continuous member or assembled form (sic) multiple sections. Optionally, the anode can have internal passages, fins, and the like to promote thermal communication with the cooling fluid. A fluid circulating means 14 circulates the fluid through the stationary anode and housing to a heat exchanger 16 to keep the target anode cool.

See Burke at column 5, lines 1-11. While the system utilizes a “cooling fluid,” Burke does not describe a cooling unit to cool the fluid to a cooler temperature, let alone a chilled state. Instead, Burke describes only a fluid by itself that is not cooled by any cooling device. Thus, Burke does not, expressly or inherently, describe a **cooling unit** configured to cool liquid to a chilled state and circulate the chilled liquid to and from the imaging element.

Claim 1, for example, recites a cooling unit that cools liquid to “a chilled state” and circulates the “chilled liquid.” While Burke describes a heat exchanger that circulates fluid to cool an anode, neither it, nor any of the other cited references, describes a unit that cools the temperature of the fluid being circulated to a point in which it is considered “chilled.” For at least this reason, Applicant respectfully submits that the proposed combination does not render claims 1, 6-7, and 9-10 unpatentable.

B. Claims 2-5 Are Not Obvious

Claims 2-5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Burke, and Dilick “as applied to claim 1” and further in view of Klostermann. Thus, for the same reasons as set forth above with respect to claim 1, Applicant respectfully submits that the proposed combination does not render claims 2-5 unpatentable. More specifically:

- (1) ITSR is non-analogous art;
- (2) Dilick, alone or in combination with the other cited references, does not disclose “an auxiliary module removably connected to said medical imaging device having a cooling unit”; and
- (3) Burke, alone or in combination with the other cited references, does not disclose “a cooling unit configured to cool liquid to a chilled state and circulate the chilled liquid to and from the imaging element”.

C. Claim 8 Is Not Obvious

Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Burke, and Dilick “as applied to claim 1” and further in view of Yahata. Thus, for the same reasons as set forth above with respect to claims 1, 6-7, and 9-10, Applicant respectfully submits that the proposed combination does not render claim 8 unpatentable.

D. Claims 11-17 Are Not Obvious

Claims 11-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Yahata, and Muchowisz.

As set forth above with respect to claims 1, 6-7, and 9-10, ITSR is non-analogous art to which a person of ordinary skill in the art would not be led. For at least this reason, Applicant respectfully submits that the proposed combination does not render claims 11-17 unpatentable.

Additionally, the proposed combination of art does not disclose all of the elements of the claims, as further described below:

1. Yahata Does Not Disclose “an auxiliary module having a booster battery pack, . . . wherein said auxiliary module is separate, distinct, and removably connected directly to said medical imaging device”

The Office Action relies on Yahata because it allegedly “teaches a booster battery pack, wherein said booster battery pack is configured to be electrically connected to said medical imaging device.” Office Action at p. 10. Yahata does not, however, either expressly or inherently describe “an auxiliary module having a booster battery pack... wherein said auxiliary module is **separate, distinct, and removably connected** (*i.e.*, capable of being disconnected and subsequently reconnected) directly to said medical imaging device” as described in claim 11 of the present application. Instead, Yahata describes a secondary battery unit that is electrically connected in circuit with a commercial power supply source, and a high power consumption unit, (e.g. an X-ray tube drive unit) such that the battery source is receiving a charge from the commercial supply source when not supplying power to the high power consumption unit.

[T]he **secondary battery unit 5A** is employed as the major power supply source to a high voltage transformer 11 via a chopper circuit 12 and a DC/AC inverter 13. As a result, the high DC power may be supplied from the secondary battery unit 5A during the scanning operation, **and this secondary battery unit 5A is charged from the single-phase commercial power source 1** during the non-scanning operation. Also, an X-ray tube 9 may be sufficiently driven by this battery unit 5A during the scanning operation.

Id. at column 5, line 67 – column 6, line 9; *see also id.* at Fig 1, items 1, 3, 5, 100 and column 2, line 63 – column 3, line 27.

Yahata describes a battery unit electrically connected with both the imaging device and the commercial power supply source. Yahata does not, however, expressly or inherently describe an auxiliary module having a battery booster pack that is "separate, distinct, and removably connected directly to said medical imaging device," as recited in claim 11. For at least this reason, Applicant respectfully submits that the proposed combination does not render claims 11-17 unpatentable.

2. Muchowicz Does Not Disclose a "an auxiliary module having a booster battery pack, . . . wherein said auxiliary module is separate, distinct, and removably connected directly to said medical imaging device"

The Office Action relies on Muchowicz because it allegedly "teaches removably connecting to said imaging device." Office Action at p. 10. Muchowicz discloses "a high voltage x-ray cable connection" that would allow two appropriate cables to be removably connected. Muchowicz at column 1, lines 45-50. Muchowicz does not, however, disclose an auxiliary module that is separate, distinct, and removably connected directly to said medical imaging device. For at least this reason, Applicant respectfully submits that the proposed combination does not render claims 11-17 unpatentable.

E. Claim 18 Is Not Obvious

Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Yahata, and Muchowicz "as applied to claim 11" and further in view of Anderton. Thus, for at least the same reasons as set forth above with respect to claim 11, Applicant respectfully submits that claim 18 is patentable. More specifically:

- (1) ITSR is non-analogous art; and
- (2) neither Yahata, nor Muchowicz, taken individually or together, discloses "an auxiliary module having a booster battery pack, . . . wherein said auxiliary module is separate, distinct, and removably connected directly to said medical imaging device".

F. Claims 19-24 Are Not Obvious

Claims 19-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Burke, Yahata, Dilick, and Muchowicz. As explained above, ITSR. For this reason alone, Applicant respectfully submits that the proposed combination does not render claims 19-24 unpatentable.

Additionally, the Office Action relies upon Burke, Yahata, Dilick, and Muchowicz in the same manner as with respect to previous claims addressed above. Thus, for at least the same reasons set forth above, the proposed combination of references fails to disclose all of the elements of claims 19-24, and, therefore, does not render those claims unpatentable.

G. Claims 25-28 Are Not Obvious

Claims 25-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Burke, Klostermann, and Dilick. As explained above, ITSR is non-analogous art. For this reason alone, Applicant respectfully submits that the proposed combination does not render claims 25-28 unpatentable.

Additionally, the Office Action relies upon Burke and Dilick in the same manner as with respect to previous claims addressed above. Thus, for at least the reasons set forth above, the proposed combination of references fails to disclose all of the elements of claims 25-28, and, therefore, does not render those claims unpatentable.

H. Claim 29 Is Not Obvious

Claim 29 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Burke, Klostermann, and Dilick “as applied to claim 25” and further in view of Yahata. Thus, for at least the same reasons as set forth above with respect to

claim 25, Applicant respectfully submits that the proposed combination does not render claim 29 unpatentable.

Additionally, the Office Action relies upon Yahata in the same manner as with respect to previous claims addressed above. Thus, for at least the same reasons set forth above, the proposed combination of references fails to disclose all of the elements of claim 29, and, therefore, does not render that claim unpatentable.

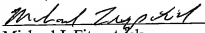
VII. Conclusion

The Applicant respectfully submits that the pending claims of the present application should be in condition for allowance for at least for the reasons discussed above and request reconsideration of the claim rejections. If the Examiner has any questions or the Applicant can be of any assistance, the Examiner is invited to contact the undersigned attorney for the Applicant. The Commissioner is authorized to charge any necessary fees or credit any overpayment to the Deposit Account of McAndrews, Held & Malloy, Account No. 13-0017.

Respectfully submitted,

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MCANDREWS, HELD & MALLOY, LTD.
500 West Madison Street, 34th Floor
Chicago, Illinois 60661
Telephone: (312) 775-8000
Facsimile: (312) 775-8100



Michael J. Fitzpatrick
Registration No. 48,510
Attorney for Applicant